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International Specialists in the Environment

MEMORANDUM

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TO: Pete Culver, RPO

THRU: Sharon Martin, FITOM

FROM: E & E/FIT

DATE: October 29, 1991

SUBJECT: HRS Considerations and Recommendations for the Laclede Coal Gas Plant Site, located in St. Louis, Missouri.
TDD #F-07-9008-020 PAN #FM00579SA
Site #Y33 Project #002
Superfund Contact: Greg Reesor
Project Manager: Keith A. Brown

The Region VII U.S. Environmental Protection Agency (EPA) tasked the Ecology and Environment, Inc.. Field Investigation Team (E & E/FIT) to conduct a Screening Site Inspection (SSI) of the former Laclede Coal Gas Plant site in St. Louis, Missouri. The purpose of the SSI is to determine if a potential environmental hazard is posed by tar and purifier wastes which may have been buried on site.

The site was first investigated by E & E/FIT under the Mound Street Power Plant Preliminary Assessment (PA) TDD #F-07-8708-029, completed on September 17, 1987. The Mound Street Power Plant PA was prompted by reports of oil accumulation in the facility and occasional oil releases to the Mississippi River.

During the PA for the former Mound Street Power Plant site, the E & E/FIT collected six liquid samples from the basement of the facility and two samples from two different manholes adjacent to the facility. All samples were screened for PCBs at a 1 ppm detection limit by the E & E/FIT Field Analytical Support Program (FASP). No PCB contaminants were identified by the Tracor gas chromatograph.

Sampling data from the SSI revealed cyanide and PAHs as the major on-site contaminants. Cyanide contamination was found throughout the site in the 0 to 2 foot deep soil samples. Deeper soil samples revealed cyanide contamination at depths at least as great as 11 feet. PAH contamination, both in shallow and deep soil samples, was restricted to small areas within the site. The greatest area of PAH contamination was found within the bermed tank farm. Only one ground water sample showed PAH contamination. However, the concentrations are far less extensive than the soil concentrations. Surface water samples showed undetected levels of PAH or cyanide contamination. Sediment samples revealed low levels of PAH contamination.

HRS CONSIDERATIONS

Prior to the SSI, a Hazardous Ranking System (HRS) PA Methodology score of 50 was calculated for the site. This score represented a worst case scenario. After completion of the SSI, a new PA methodology score of 27 was calculated for the site. Sample analyses indicated that the only primary target population for the site is now a potential target population. Thus, the drop in score. The ground water, soil, and air pathways scored slightly higher after the SSI on the PA Methodology Score Sheets. Their scores are 3, 9, and 52, respectively. The higher scores are due to the increase in the waste characteristic score, which was calculated after the SSI was completed. Previously, the waste characteristic score was 18, but this had been calculated incorrectly. The correct waste characteristic score is 100. Thus, the ground water, soil, and air pathways scored higher. The surface water pathway score, however, dropped from the maximum score of 100 to only 11. The score of 100 was calculated with the assumption of a suspected release. A primary target population of approximately 300,000 people produced a drinking water threat score of 3,000,000. However, surface water samples indicated that there is currently no significant contaminants being released from the site into the surface water. Thus, the primary target population is now a secondary target population under the no suspected release criteria. This dropped the drinking water threat score down to 7.

RECOMMENDATIONS

E & E/FIT recommends that the Corps of Engineers piezometer wells, which are located between the site and the Mississippi River, be sampled on an annual basis to determine if contaminants are migrating in the ground water. There is the potential for a ground water to surface water release because of the close proximity of the Mississippi River. No other work needs to be performed at the current time, due to the fact that no other pathway targets exist near the site, except for the surface water pathway potential drinking water threat target. If more significant contamination is detected in the piezometer wells, then additional monitoring well installation is recommended.

Attachments: PA Methodology Score Sheets
HRS References